



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D4016-3**Job Sheet 199544****Part No:** D4016-3**Job Qty:** 155 pcs**Part Name:** Hinge Half, Lid**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 8/27/19**Job Tracking No:****Due Date:** 9/6/19**Created By:** Kimberley Guerin**Type:** Stock**Description:**

Note: DWG REV B SHEET 2 I[PP REV:A NEW ISSUE 09-11-27 JL VERIFIED BY:DD IPP Rev:B as per dwg REV.A
DD 10.02.22 verified by:EC

Ship Via:**Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	
					Setup Hrs	Run Hrs	Workcenter / Supplier Lead Time	
100	Purchasing	155 pcs	9/6/19		0.00	0.00	Purchasing - 1	R OCT 11 2019
							Purchasing - 2	
							Purchasing - 3	
110	Packaging 2-1 - Receive - B4B	155 pcs	9/6/19		0.00	0.00	Packaging 2 - 1 - B4B	R OCT 11 2019
							Packaging 2 - 2 - B4B	
							Packaging 2 - 3 - B4B	
							Packaging 2 - 5 - B4B	
							Packaging 2 - 4 - B4B	
							Packaging 2 - 6 - B4B	
							Packaging 2 - 7 - B4B	
							Packaging 2 - 8 - B4B	
							Packaging 2 - 9 - B4B	
							Packaging 2 - 10 - B4B	
							Packaging 2 - 11 - B4B	
							Packaging 2 - 12 - B4B	
							Packaging 2 - 13 - B4B	
							Packaging 2 - 14 - B4B	
							Packaging 2 - 15 - B4B	
							Packaging 2 - 16 - B4B	
							Packaging 2 - 17 - B4B	
							Packaging 2 - 18 - B4B	
							Packaging 2 - 19 - B4B	
							Packaging 2 - 20 - B4B	
							Packaging 2 - 21 - B4B	
							Packaging 2 - 22 - B4B	
							Packaging 2 - 23 - B4B	
							Packaging 2 - 24 - B4B	
							Packaging 2 - 25 - B4B	
							Packaging 2 - 26 - B4B	
							Packaging 2 - 27 - B4B	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S221960**Part:** D4016-3**Job No:** 199544**Serial No/Batch:** S221960**Revision:****Inspector:****Exp Date:****Instructions:** Various STC's

Date: 10/11/19

Plex 8/27/19 4:05 PM Dart.Guerin.Kimberley

					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
120 QC 6	155 pcs	9/6/19	0.00 0.00	QC 6 - 9		
				QC 6 - 68		
				QC 6 - 61	DAS	OCT 11 2019
				QC 6 - 40	81	
				QC 6 - 81	9-89	
190 Packaging 3-1 - Stock - B4B	155 pcs	9/6/19	0.00 0.00	Packaging 3 - 1 - B4B		
				Packaging 3 - 2 - B4B		
				Packaging 3 - 3 - B4B		
				Packaging 3 - 4 - B4B		
				Packaging 3 - 5 - B4B	DAS	
				Packaging 3 - 6 - B4B	28	
				Packaging 3 - 7 - B4B	9-89	
				Packaging 3 - 8 - B4B		
				Packaging 3 - 9 - B4B		
				Packaging 3 - 10 - B4B		
				Packaging 3 - 11 - B4B		
				Packaging 3 - 12 - B4B		
				Packaging 3 - 13 - B4B		
				Packaging 3 - 14 - B4B		
				Packaging 3 - 15 - B4B		
				Packaging 3 - 16 - B4B		
				Packaging 3 - 17 - B4B		
				Packaging 3 - 18 - B4B		
				Packaging 3 - 19 - B4B		
				Packaging 3 - 20 - B4B		
				Packaging 3 - 21 - B4B		
				Packaging 3 - 22 - B4B		
				Packaging 3 - 23 - B4B		
				Packaging 3 - 24 - B4B		
				Packaging 3 - 25 - B4B		
				Packaging 3 - 26 - B4B		
				Packaging 3 - 27 - B4B		
				Packaging 3 - 28 - B4B		
				Packaging 3 - 29 - B4B		
				Packaging 3 - 30 - B4B		
				Packaging 3 - 31 - B4B		
				Packaging 3 - 32 - B4B		
				Packaging 3 - 33 - B4B		
				Packaging 3 - 34 - B4B		
				Packaging 3 - 35 - B4B		
				Packaging 3 - 36 - B4B		
200 QC 21 - SA	155 pcs	9/6/19	0.00 0.00	QC 21 - SA - 21		OCT 16 2019
				QC 21 - SA - 70		DAS
				QC 21 - SA - 53		70
9-89						
Part Op 100 - ISSUE P/O: _____ MANUFACTURE D4016-3 AS PER DWG C OF C IS REQUIRED						
Descriptions: 110 - (Receive & Inspect for Damage & Mat'l Certs)						
120 - QC6- All purchased or subcontracted products						
190 - (Identify as per dwg & Stock Location: _____), LOCATION: WA004-6						
200 - (QC21- Final Inspection - Work Order Release)						

Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
D4016-3P	Hinge Half, Lid	155 Ea (1 ea)	100-Purchasing	S221958	
Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	
100-Purchasing	D4016-3P	155	0	0	
Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Hinge Half, Lid	0.880Inches ± 0.030	0.910 0.850		
2	Hinge Half, Lid	0.130Inches ± 0.030	0.160 0.100		
3	Hinge Half, Lid	0.250Inches ± 0.010	0.260 0.240		
4	Hinge Half, Lid	0.030Inches ± 0.030	0.060 0.000	Radius	
5	Hinge Half, Lid	0.130Inches ± 0.030	0.160 0.100		
6	Hinge Half, Lid	0.500Inches ± 0.030	0.530 0.470		
7	Hinge Half, Lid	0.630Inches ± 0.030	0.660 0.600		
8	Hinge Half, Lid	0.563Inches ± 0.010	0.573 0.553		
9	Hinge Half, Lid	0.257Inches + 0.006 - 0.001	0.263 0.256	Diameter	

Plex 8/27/19 4:05 PM Dart.Guerin.Kimberley

Pack List

Number: 144468

Date: 09-Oct-19

To

DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-5246

Ph: 613-632-5200

Fax: 613-632-5246

Terms		Ship Via	
Net 30 days			
Quantity	Description		
155 each	Part: D4016-3P HINGE HALF, LID SO: 25759 **LOT #107417	Rev: B PO: HB043733 Line: 1	DAS 81 9-89
CERTIFICATE OF COMPLIANCE "I hereby certify that the material described above is in conformance with applicable physical and dimensional specifications; that it was manufactured in accordance with applicable process specifications; and has been inspected to verify conformance to those specifications." APPROVED SIGNATORY (QUALITY ASSURANCE)			

RECEIVED

OCT 11 2019

DART AEROSPACE LTD.

ETM Industries Inc

Page 1 of 4

AS9102 Revision B First Article Inspection

Form 1: Part Number Accountability

1. Part Number D4016-3P	2. Part Name HINGE HALF, LID	3. Serial Number N/A	4. FAI Number N/A
5. Part Revision Level B	6. Drawing Number D4016	7. Drawing Revision Level B	8. Additional Changes N/A
9. Manufacturing Process Reference 107417	10. Organization Name ETM Industries Inc.	11. Supplier Code N/A	12. P.O. Number HB043733
13. Detail FAI ☒	14. Full FAI ☒	<i>Baseline Part Number including Revision Level</i>	
Assembly FAI ☐	Reason for Partial FAI: Not Applicable	N/A	
a) If above part number is a detail part only, go to Field 19 b) If above part number is an assembly, go to the "Index" section below.			
INDEX of part numbers or sub assembly numbers required to make the assembly noted above.			
15. Part Number	16. Part Name	17. Part Serial Number	18. FAI Report Number
N/A	N/A	N/A	N/A

1) Signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

2) Also indicate if the FAI is complete per Section 5.4: ☒ FAI Complete☐ FAI Not Complete

19. Signature ADAM GAYLARD

20. Date OCT 8 2019

21. Reviewed by

22. Date

23. Customer Approval

24. Date

AS9102 Revision B First Article Inspection

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es),
Functional Testing

1. Part Number D4016-3P	2. Part Name HINGE HALF, LID		3. Serial Number N/A		4. FAI Report Number N/A
5. Material or Process – Name	6. Specification Number	7. Code	8. Special Process Supplier Code	9. Customer Approval Verification (Yes/No/N/A)	10. Certificate of Conformance Number
MATERIAL: STAINLESS STEEL	304SS AS PER ASTM A276	N/A	N/A	N/A	274863
11. Functional Test Procedure Number	12. Acceptance report number, if applicable				
Not Applicable	Not Applicable				
13. Comments					
14. Prepared By ADAM GAYLARD			15. Date OCT 8 2019		

ETM Industries Inc

AS9102 Revision B First Article Inspection

Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

Page 3 of 4

1. Part Number D4016-3P		2. Part Name HINGE HALF, LID		3. Serial Number N/A		4. FAI Report N/A	
Characteristic Accountability				Inspection / Test Results			
5. Char. No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designated Tooling	11. Non Conformance Number	14. Reference Documents
1	SHEET 2	N/A	MATERIAL -3: 304/316 STAINLESS STEEL BAR, PER ASTM A276, REF DART SPEC M304B	ACCEPT	VERIFY	N/A	274863
2	SHEET 2	N/A	FINISH: NONE	ACCEPT	VERIFY	N/A	N/A
3	SHEET 2	N/A	TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE SPECIFIED	ACCEPT	VERIFY	N/A	N/A
4	SHEET 2	N/A	UNITS: INCHES UNLESS OTHERWISE NOTED	ACCEPT	VERIFY	N/A	N/A
5	SHEET 2	N/A	BREAK SHARP EDGES .005" TO .010" MAX	ACCEPT	VERIFY	N/A	N/A
6	SHEET 2	N/A	IDENTIFICATION: NONE	ACCEPT	VERIFY	N/A	N/A
7	SHEET 2	N/A	WEIGHT -3: 0.04 LBS	ACCEPT	VERIFY	N/A	N/A
8	SHEET 2	N/A	.88"±.030"	.880"	CALIPERS	N/A	N/A
9	SHEET 2	N/A	.50"±.030"	.503"	CALIPERS	N/A	N/A
10	SHEET 2	N/A	.13"±.030"	.131"	CALIPERS	N/A	N/A
11	SHEET 2	N/A	R.03"±.030"	.032"	RAD GAGE	N/A	N/A
12	SHEET 2	N/A	.250"±.010"	.249"	CALIPERS	N/A	N/A
13	SHEET 2	N/A	.13"±.030"	.126"	HIEGHT GAGE	N/A	N/A

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By

ADAM GAYLARD

13. Date

OCT 8 2019

ETM Industries Inc

AS9102 Revision B First Article Inspection

Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

Page 4 of 4

1. Part Number D4016-3P		2. Part Name HINGE HALF, LID		3. Serial Number N/A	4. FAI Report N/A		
Characteristic Accountability				Inspection / Test Results			
5. Char. No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designated Tooling	11. Non Conformance Number	14. Reference Documents
14	SHEET 2	N/A	.63"±.030"	.629"	CALIPERS	N/A	N/A
15	SHEET 2	N/A	.257" +.006"/-.001"	.259"	GAGE PIN	N/A	N/A
16	SHEET 2	N/A	563" ±.010"	.561"	HIEGHT GAGE	N/A	N/A

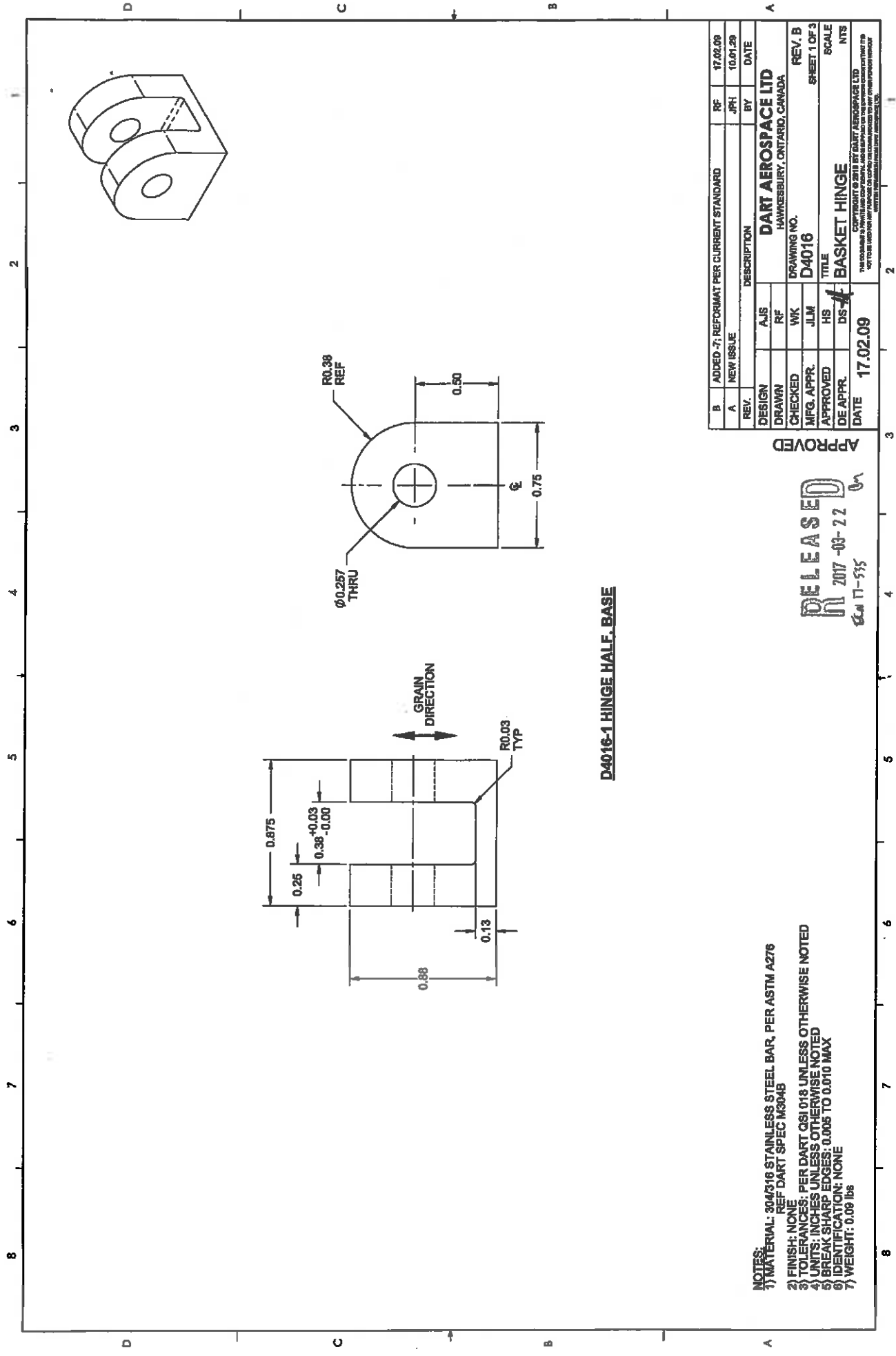
The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By

ADAM GAYLARD

13. Date

OCT 8 2019

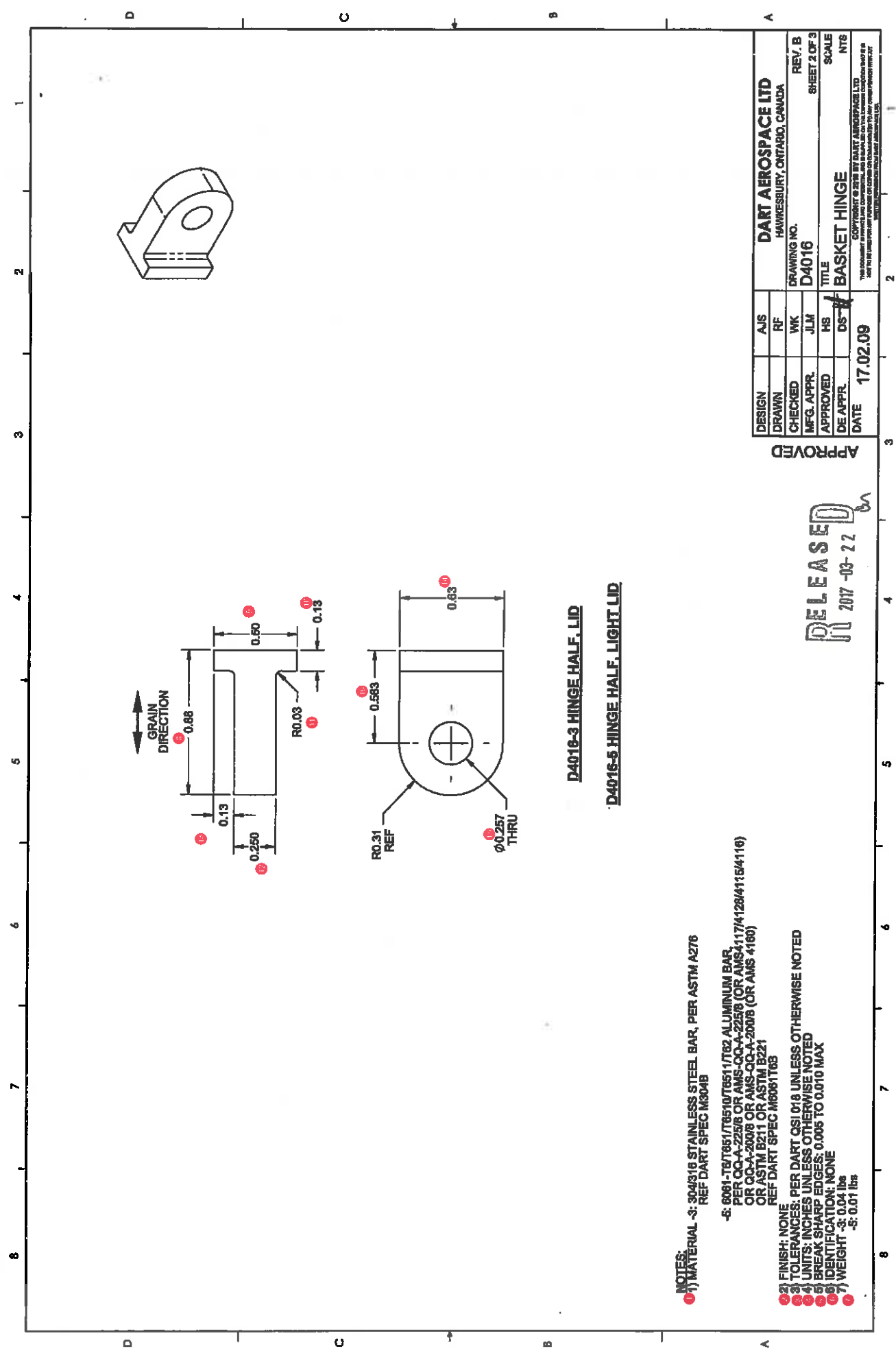


- NOTES:
- 1) MATERIAL: 304/316 STAINLESS STEEL BAR, PER ASTM A276
REF DART SPEC M304B
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.09 lbs

DELETED
2017-03-22
11-515

B	ADDED -7; REFORMAT PER CURRENT STANDARD	RF	17.02.09
A	NEW ISSUE	JPH	10.01.29
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	RF		
CHECKED	WK		
MFG. APPR.	JLM		
APPROVED	HS		
DE APPR.	DS		
DATE	17.02.09		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D4016			
REV. B			
SHEET 1 OF 3			
TITLE BASKET HINGE			
SCALE NTS			
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D4016-1 HINGE HALF, BASE



D4018-3 HINGE HALF, LID

D4018-5 HINGE HALF, LIGHT LID

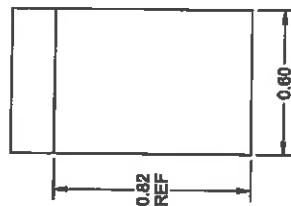
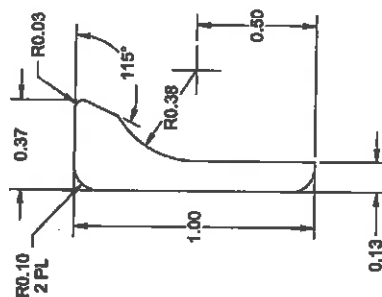
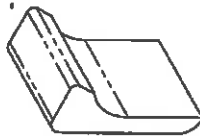
- NOTES:
- 1) MATERIAL -3: 304/316 STAINLESS STEEL BAR, PER ASTM A276
REF DART SPEC M304B
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT -3: 0.04 lbs
-5: 0.01 lbs
 - 8) 6061-T6/7050/7050/7051/7052 ALUMINUM BAR,
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
REF DART SPEC M6061T63

DESIGN	AJS	RF	WK	JLM	HS	DS	DATE	17.02.09	1
DRAWN									2
CHECKED									3
MFG. APPR.									4
APPROVED									5
DE APPR.									6
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA									7
DRAWING NO. D4018									8
REV. B									9
SHEET 2 OF 3									10
TITLE BASKET HINGE									11
SCALE NTS									12
DATE 17.02.09									13
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA									14
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APPROVED

RELEASED

2017-03-22



GRAIN
DIRECTION

D4016-7 STOP

NOTES:
 1) MATERIAL: 304/316 STAINLESS STEEL BAR, PER ASTM A276
 REF DART SPEC M304B
 2) FINISH: NONE
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION: NONE
 7) WEIGHT: 0.03 lbs

NOTES:

1) MATERIAL: 304/316 STAINLESS STEEL BAR, PER ASTM A276
REF DART SPEC M304B

2) FINISH: NONE

2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
UNITS: INCLUDES UNITS OF OTHER MATERIALS

4 UNITS: INCHES UNLESS OTHERWISE NOTED

5} BREAK SHARP EDGES: 0.005 TO 0.010 MAX
8} IDENTIFICATION: NONE

6} IDENTIFICATION: NONE
7} WEIGHT: 0.03 lb8

SCALE WEIGHT: 0.03 LBS

DESIGN	AJS
DRAWN	RF
CHECKED	WK
MFG. APPR.	JLM
APPROVED	HS
DE APPR.	DS
DATE	17.02.09

DART AEROSPACE LTD

HAWKESBURY, ONTARIO, CANADA

DRAWING

NO.

D4016

DATE	TITLE
01-06-09	

BACK

BASKE

BACKET HINGE

THIS DOCUMENT IS PREPARED FOR THE U.S. GOVERNMENT AND IS NOT TO BE DISTRIBUTED OUTSIDE THE U.S. GOVERNMENT. IT IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PREPARED.

WATSON PUBLICATIONS, INC.



Castle Metals®

A. M. Castle & Co.

**PACKING SLIP/
CERTIFICATE OF CONFORMANCE**

Page 1 of 1

Shipment No:3940599

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: E.T.M. INDUSTRIES INC P.O. BOX 610 266 HALL AVENUE RENFREW, ON K7V 4E7 CA	Ship To: E.T.M. INDUSTRIES INC 266 HALL AVENUE RENFREW, ON K7V 2S5 CAN	Deliver To: E.T.M. INDUSTRIES INC 266 HALL AVENUE RENFREW, ON K7V 2S5 CA
Date Shipped 03-JUL-19	F.O.B. ORIGIN	Freight Terms Prepaid	Carrier LOCAL_FLEET	BOL No 3940599-6

Shipment Details

Order No 1112400154	Line No 2	Item No 7777.MO	Description 0.7500.SQ.304/304L.STAINLESS.CD.132.0000-156.0000 CUT TO 1.125 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: SEE SPECIAL INSTRUCTIONS LOGBOOK-SALES/TESTS,PLEASE FORWARD P/S & CERTS TO CUSTOMER VIA EMAIL jlowe@etmindustries.on.ca		
Purchase Order No 115019	Part Number	Ordered Qty 628.00 PCS	Invoice Qty 628.00 PCS		
Delivery No. 122744085	Mill/Source VALBRUNA CORPORATION	Heat Number 	Mech Id 628	Width (IN)	Length (IN)
					Shipped Qty(LBS) 112.4516

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any special requirements. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment date. Material not meeting a part of the description cannot be returned for credit.	
Reviewed by Authorized Castle Metals Representative:	Date: JUL 03 2019

107417-157ea
107418-157ea
107419-157ea
107420-157ea

RECEIVED
MM - 5 2019

Product Certification Report
Report Number: 5615961

VALBRUNA



SLATER STAINLESS, INC.
 1400 TAYLOR STREET WEST • PO BOX 630
 FORT WAYNE, IN 46802 USA
 PHONE 260.551.2800 • FAX 260.551.2001

Certified on Mar 01, 2019 Page 2 of 2

Order ID	0A1608314 0010	Order Date	9/17/18	Customer ID	7777	Order Priority Code	
Part 1	.7500	Part 2	.7500	Product Shape	274863	Product Surface	0008000061
Product Shape		Product Surface		Customer ID	486690	Customer Purchase Order	
Square		Cold Dryw. Finish		Product Grade	304/304L		
Length (Inches)	132.000	Min	156.000	Max	PL16005373/1	Weight	008639 LBS

Ship To:
 A.M. CASTLE & CO.
 3800 ENTERPRISE DRIVE
 JAMESVILLE, WI 53546

Location of tensile fracture: Inside middle of gage length, %elong after fracture.
 Chemical Analysis performed at Acciaierie Valbruna, Italy.
 No mercury or low melting alloy contamination. No weld repair.
 Melted and manufactured in Italy.

Material conforms to listed specifications. DRA's compliant. Our heat treat furnaces use air atmosphere.
 Quality system is compliant with ISO 9001:2015. Produced in accordance with EN 10204 3.1.

115019
 107417
 107418
 107419
 107420

RECEIVED

M. 5 2019

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

Thad Landwehr

thad.landwehr@valbruna.us

Thad Landwehr